



Program Executive Officer Littoral and Mine Warfare

***Mr. Victor S. Gavin
Executive Director***



Role, Products & Services

- Originally established in 1992 as PEO Mine Warfare (PEO MIW)
- Realigned as *PEO Littoral and Mine Warfare (PEO LMW)* OCT 2002 assigning increased responsibility for Undersea and Littoral Warfare programs
- PEO LMW designs, delivers and maintains the systems, equipment and weapons needed by the warfighter to dominate the littoral battle space and provide the *Warfighter Assured Access!*

19 years of
"culture"

Naval
Special
Warfare
PMS 340
CAPT T.
Gajewski



SOCOM

Anti-Terrorism/
Force Protection
(Afloat)
PMS 480
CAPT J. Day



C-IED and
EOD
PMS 408
CAPT J.
Neagley



NECE

Maritime
Surveillance
Systems
PMS 485
CAPT J. Ferrer



Unmanned
Maritime
Vehicle Systems
PMS 406
CAPT D. Ashton



USE

Remote
Mine Hunting
System
PMS 403
Mr. Steven Lose



Mine Warfare
Systems
PMS 495
Ms. D Carson-
Jelley



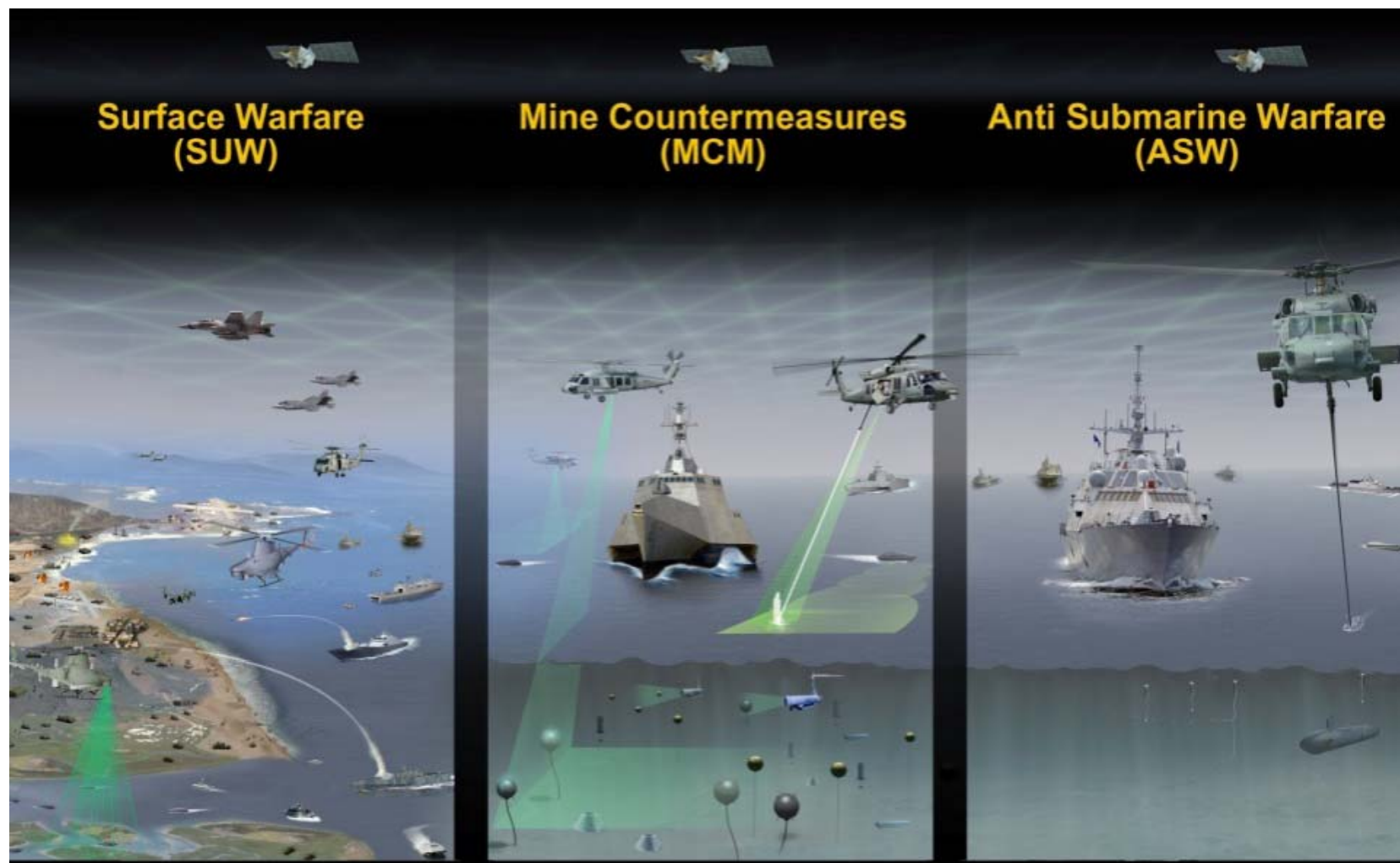
LCS Mission
Modules
PMS 420
CAPT J.
Ailes



SWE



LCS Mission Modules

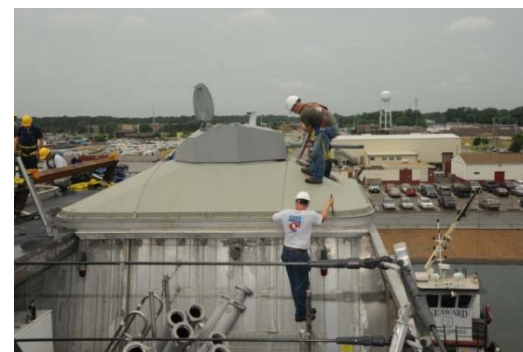
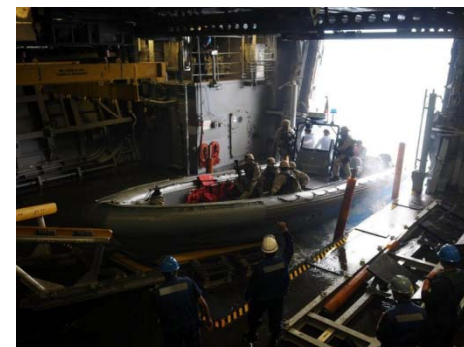


Assuring Access in MCM, ASW & SUW Mission Areas



USS Freedom Early Deployment

- ◆ USS Freedom deployed to SOUTHCOM from February – April 2010
 - Embarked a SUW MP increment 1 with
 - ★ Two Gun Mission Modules (GMM)
 - ★ A Maritime Security Module (MSM) Berthing & Habitability Modules
 - USS Freedom successfully assisted with several drug interdiction operations using the MSM and their embarked team
 - USS Freedom conducted a FIREX events in the Pacific Ocean
- ◆ Lessons Learned
 - Communication on ship schedule, safety and combat certification and crew qualifications must be shared across the leadership
 - Pre-staged repair parts were critical in returning the Rigged Hull Inflatable Boat to service in a few days after an engine casualty
 - Test sequence network is a vital tool in communicating the test requirements and ensuring required testing is scheduled and accomplished.
 - Validated LCS MM sustainment concept and processes





Overall LCS MM Program Status



- ◆ **MCM Mission Package**
 - MCM DT on track to begin in Q3 FY11
 - MCM OT on track to begin Q4 FY12
 - MCM MP IOC FY13
- ◆ **SUW Mission Package**
 - SUW DT on track to begin in Q3 FY12
 - SUW OT on track to begin Q4 FY12
 - SUW MP IOC FY13
- ◆ **Anti-Submarine Warfare (ASW) Mission Package**
 - ASW Increment I development suspended with MP #1
 - ASW Increment II planning begins in FY12
 - ASW Increment II development begins in FY13
 - ASW MP IOC FY16



IOC for the LCS Mission Modules is defined as:

- 1) Operational Testing is complete
- 2) Infrastructure, logistics and a trained crew are available
- 3) First ship with embarked MCM MP is a deployable asset and assigned to an Operational Commander



Delivering on the Promise

Mine Countermeasures Mission Package (MCM MP)

- ✓ Sep 2008: MCM MP End-to-End Phase 1 (mock-up) integration events completed for LCS 1 and LCS 2.
- ✓ Aug 2009: MCM MP End-to-End Phase 2 integration & at-sea ops completed.
- ✓ Sep 2010: MP Swap out Completed LCS-1.
- ✓ Oct 2010: MCM MP End-to-End Phase 3 completed.
- ✓ Dec 2010: MCM MP Phase I Integration Events completed.
- ☐ Jun 2011: MCM MP DT on LCS 2 begins.

AN/AQS20

- DT Complete, OT Q4 2011
- ALMDS
- DT Complete, OT Q4 2011
- AMNS
- Currently in OT

Surface Warfare Mission Package (SUW MP)

- ✓ FY10: Surface to Surface Missile Module (SSMM) restrained fire testing and analysis complete.
- ✓ FY10: SUW Mission Package #1 deployed on USS FREEDOM.
- ✗ May 2010: NLOS-LS cancelled by OSD AT&L.
- ✓ 1st Qtr FY11: SSMM Trade Study briefed to Navy leadership.
- ☐ GMM Structural Test Fire planned for 3rd Qtr FY12
- ☐ SUW DT (GMM & MSM) on LCS 1 planned for 4th Qtr FY12
- ☐ SUW OT (GMM & MSM) on LCS 1 planned for 2nd Qtr FY13

Anti-Submarine Warfare Mission Package (ASW MP)

- ✓ FY10: ASW MP#1 (Increment I) development, integration, test, and procurement plans have been discontinued. No further Increment I procurements are planned.
- ☐ ASW MP design is being modified as a result of warfighting analysis to include new mission systems (Increment II).





MCM Mission Package Status



- ✓ Sep 2008: MCM MP End-to-End Phase 1 (mock-up) integration events completed for LCS 1 and LCS 2.
- ✓ Aug 2009: MCM MP End-to-End Phase 2 integration & at-sea ops completed.
- ✓ Aug 2010: AN/AQS-20A Developmental Testing completed.
- ✓ Sep 2010: MP Swap out Completed LCS-1.
 - Met 96 hr objective
- ✓ Oct 2010: MCM MP End-to-End Phase 3 completed.
 - Verified E2E connectivity and functionality of RMS, UISS & OAMCM systems
 - Final report due Dec 2010
- ✓ Dec 2010: Phase I Integration Events Completed.



- ☐ 3rd Qtr FY11: MCM MP Developmental Testing begins on LCS 2.
- ☐ 4th Qtr FY12: MCM MP Operational Testing begins on LCS 2.





SUW Mission Package Status

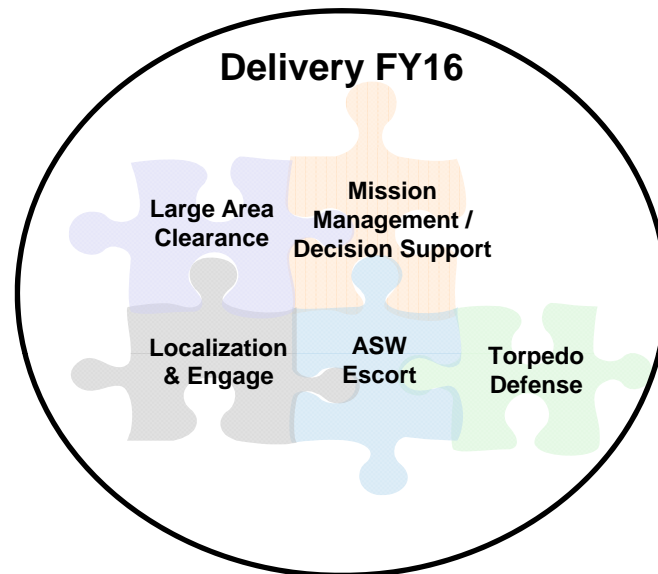


- ✓ SUW Mission Package #1 Rollout Ceremony July 08 in Dahlgren, VA
- ✓ SUW Mission Package #2 manufacturing complete, qualification testing in progress
- ✓ LCS 30mm Gun Mission Modules (GMMs) designed and constructed at Naval Surface Warfare Center, Dahlgren Division (NSWC-DD) GMMs deployed on USS Freedom
- ✓ GMM End-to-End integration completed onboard USS Freedom
- ✓ IA Certification – Complete
- ✓ 1st SUW MP Crew Training conducted at NSWC-DD Aug 09
- ✓ Missile restrained fire testing and analysis complete
- ✓ NLOS-LS Module completed
- ✓ SUW Command & Control Software successfully tested at Lockheed Martin and General Dynamics Land Based Sites. Authorized and deployed on USS FREEDOM
- ✓ SUW Mission Package #1 deployed on USS FREEDOM
- NLOS-LS cancelled by Army 14 May 2010
- ✓ SSMM Trade Study briefed to Navy leadership and a plan forward is being worked
- ☐ GMM Structural Test Fire (STF) planned for 3rd Qtr FY12
- ☐ Complete Irregular Warfare design and development in FY12
- ☐ SUW DT (GMM & MSM) on LCS 1 begins 3rd Qtr FY12
- ☐ SUW OT (GMM & MSM) on LCS 1 begins 4th Qtr FY12





ASW Mission Package Capabilities Increment II



Torpedo Defense & Countermeasure Capability

Continuous Active Sonar Variable Depth Sonar

Aviation

Replaces
Legacy Capability



FFG



Summary

- ◆ Offboard vehicles with modular sensor and weapons payloads provide flexible warfighting capability
- ◆ Modularity affords:
 - Operational flexibility
 - Acquisition response to changing demand
- ◆ Mission Package Support Facility has been established and is the hub for all mission module maintenance
- ◆ Executing a phased delivery of matured mission systems
 - ✓ Two (2) MCM, two (2) SUW and one (1) ASW Mission Packages Delivered
 - ✓ At-sea Testing progressing for all MPs
 - ✓ Fielded Prototype Maritime Security Module in response to CNO tasking

Focused For The Fight: Any Ship, Any Package, Any Time



THEY *FIGHT* for US



Follow us on
Facebook®
at "PEO LMW"



WE *WORK* for THEM



BACK UP SLIDES



ASW MP Status

- **ASW Increment 1 delivered in FY08**
 - **Development & procurement of Increment 1 was suspended with ASW MP#1 based on POM-10 analysis.**
 - **ASW Mission Package #1 will not be included in Navy inventory objective of 16 ASW Mission Packages.**
- **ASW Increment 2 will IOC in FY16**



ASW MP Plan (Increment II)

| Program | Prior Yr | FY11 | FY12 | FY13 | FY14 | FY15 | FY16 | FY17 | FY18 | Current Inventory |
|--|----------|--------|------|------|--------|--------|------|-------|------|-------------------|
| Continuous Active Sonar (CAS) Variable Depth Sonar (VDS) (x1) | | | | | ▲ DT | OT | IOC | | | 1 |
| Multi Functional Towed Array (MFTA) (x1) | IOC** | | | | | | | | | 2 |
| Light-Weight Towed (LWT) Torpedo Countermeasure (x2) | | | | | ▲ DT | OT | IOC | | | 1 |
| Airborne Low Frequency Sonar (ALFS) | IOC*** | | | | | | | | | 49 |
| ASW MP | | | | | ▲ DT | OT | IOC* | FOT&E | | 0 |
| | | | | | ◆ MS B | ◆ MS C | | | | |
| ASW MP Deliveries (Increment I & II) | 1 **** | | | | | | 2 | | 3 | 1 |
| LCS Seaframe | | ◆ MS B | | | IOC | | | | | |

▲ = First Production Buy (LRIP or Production Article)

= ASW Mission Package Deliveries

Notes:

* ASW MP IOC: 1) Mission Package is delivered and tested in conjunction with full LCS operational testing; 2) infrastructure, logistics and a trained crew and support are available; and 3) the first ship with embarked ASW MP is a deployable asset assigned to an Operational Commander. ASW MP IOC planned for FY16 will include Increment II systems.

** MFTA and associated processing is subsystem of the SQQ 89 ACAT I Program.

*** The ALFS and associated processing is a subsystem of the MH-60R ACAT I Program and will be provided as Navy standard inventory.

**** Development & procurement of initial ASW Mission Packages were suspended with ASW Mission Package #1, which was delivered in FY 2008. ASW Mission Package #1 will not be included in Navy inventory objective of 16 ASW Mission Packages.






Pre-Decisional

Acquisition Sensitive



ASW MP Status (Increment II)

- ASW MP Increment 2 SE & analysis begins in FY12; Development begin in FY13; initial delivery is planned for FY16 with the following systems:
 - 1 VDS (LRIP) system (ie, CAS signal processing; aux. power generation and distribution/control; and Multi-Function Towed Array acoustic receiver)
 - 1 Torpedo Defense system with two LWT countermeasures
 - Support containers, handling equipment and tools.
 - Integrated Aviation Detachment (1 MH-60R helo with ALFS and 2 MQ-8B VTUAVs)

| System / Module | | Comments/Remarks |
|--|--|---|
| Torpedo Defense Module (x1) | | At-sea demo of ADM LWT in FY12 |
| - Light-Weight Tow (LWT) Torpedo Countermeasure (x2) |  | A selected winner in FY11 Defense Acquisition Challenge (DAC) competition. Planned DAC effort will validate LWT countermeasure performance. LCS ASW MP Integration funding to start FY13. |
| ASW Escort Module (x1) | | At-sea demo of ADM VDS & MFTA in FY12 |
| - Multi-Function Towed Array (MFTA) System (x1) |  | Off the shelf Mission System being tailored for this application by PEO IWS 5. LCS ASW MP integration funded to start in FY13. |
| - Continuous Active Sonar – Variable Depth Sonar (CAS VDS) (x1) |  | In development by PEO IWS 5. Advanced Development Model contract awarded 5 JUL 2010. Plan to release RFI in FY12 and RFP in FY13. |
| Aviation Module (x1) | | |
| - MH-60R helo with (ALFS) (x1) |  | |
| - VTUAV (x2) |  | |

Pre-Decisional

Acquisition Sensitive



What's Next?

Industry Day (Tentatively Scheduled for Summer 2011)

- ◆ **Solicit Your Feedback on Future Capability Increments**
- ◆ **Goal is Rapid and Cost Effective Introduction of New Capability**

**WHAT ARE YOUR IDEAS?
WE WOULD LIKE TO SEE YOUR PROPOSALS!!**